1 THREAD BASED SCALABLE ROUTING FOR AN ACTIVE ROUTER

2   ABSTRACT

3   In the present scalable system routing method, received packets are

4   associating with threads for processing the received packets. While a previously

5   received packet is being processed, arrival of an interrupt is checked. If there is an

6   interrupt, a thread is created associating the interrupt is created.   Then, a

7   determination of whether the thread associated with the interrupt has a priority that

8   is higher than the priority of a thread associated with the previously received

9   packet is made. If the thread associated with the interrupt has a higher priority

10 than the previously received packet, the thread associated with the previously

11 received packet is saved in a Shared Arena storage area. However, if the thread

12 associated with the interrupt does not have a higher priority than the previously

13 received packet, the thread associated with the interrupt is queued. Because

14 threads are attached to the packets, the threads can now be suspended and resumed

15 without having to disable interrupts, which includes periods during a context

16 switch. As a result, a more flexible and efficient scheduling routing method can be

17 implemented.

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